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ABSTRACT

This study focused on the review process before social studies testing. The students involved in the study were 71 13 and 14-year olds and came from predominantly middle to upper class social status in a Knoxville, Tennessee suburb. The influence of an interactive review based on the quiz show "Jeopardy" was compared with that of a "seatwork" review. In the "Jeopardy" review, three teams competed to answer questions correctly, and in the seatwork review, students completed a review sheet. The study was repeated, switching seatwork and "Jeopardy" groups, so that data were available for 142 students. Results show no significant difference in test scores between students receiving the "Jeopardy" review and those receiving the seatwork review. Appendixes contain a letter of approval from the school system and sample parent approval forms for the study. (Contains 31 references.) (SLD)

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ED 457 216

A COMPARISON OF EIGHTH GRADE STUDENTS' TESTING SCORES BETWEEN THE *JEOPARDY* AND *SEATWORK* TYPES OF REVIEW

An Action Research Project

Presented to

the Department of Teacher Education

of Johnson Bible College

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In Partial Fulfillment

of the Requirement for the Degree

Master of Arts in Holistic Education

by

Lee T. Daft

July 2001

TM033314

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APPROVAL PAGE

This Research Paper by Lee Daft is accepted in its present form by the Department of Teacher Education at Johnson Bible College as satisfying the action research requirements for the degree Master of Arts In Holistic Education.

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ABSTRACT

This study of eighth grade students concerned itself with the review process leading up to the testing process. The students involved in this study were thirteen and fourteen years old, and came from predominantly middle to upper class social status, with a few students who came from low-income families, in a Knoxville, Tennessee, suburb. The purpose of this study was to test the academic influence of an interactive *Jeopardy* review, as compared to a "seatwork" review. The *Jeopardy* review consisted of three teams, each competing to answer fifty-one questions correctly faster than the other two teams, in quiz-show fashion. In the "seatwork" review, students individually filled out a pre-made review sheet during the class period. Both the *Jeopardy* and "seatwork" review groups received the same review sheet to fill out and study for the test.

Since Social Studies, unlike reading and math, was not grouped according to skill level, all control and experimental classes were grouped heterogeneously, with high achieving and low achieving students dispersed among the classes. The number of students within the sample was seventy-one. This study took place over a six week period, where all four class periods (A, B, C, D) participated. For the first review, classes A and B were the experimental groups and C and D were the control groups. For the second review, the groups switched, and groups A and B were control and C and D were experimental. With the study covering two reviews and tests, the sample increased to one hundred forty-two. This study took place in the fourth module of this school year (2001), which covered January third through March sixth.

Upon collection of the data from test one and test two, the researcher compared the

resulting test scores using a paired-sample t-test. The results of this study showed no significant difference in scoring between those students receiving the *Jeopardy* review and those receiving the "seatwork" review, within the .05 level of significance. Therefore, the researcher maintained his null hypothesis.

ACKNOWLEDGEMENTS

Mom and Dad, you guys are awesome! Thank you so much for your prayers, your hard work, and your desire to help me through this difficult year of college. Thank you for giving me a Christian home, and a great Christian example.

Carole, thank you for your support through these rough times. I can't believe that you put up with me through all this! Your prayers have meant the world to me. I love you.

Father, thank you for your blessing on college, on my life, and on my family. You truly are in control, and I am not. I will live my life for You.

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Chapter 1

INTRODUCTION

Significance of the Problem

This study of eighth grade students concerned itself with the review process leading up to the testing process. Much research deems an interactive learning environment important in reaching the full academic potential of students, resulting in a deeper understanding of the material and higher grades.

Statement of the Problem

Teachers and administrators still seek to find the best way to educate students within their school systems and classrooms. According to current research, interaction plays a major role in the learning process. Students with an interactive review may or may not achieve higher scores on tests than the students completing review sheets at their seats. Does a particular type of review improve students' scores? The purpose of this study was to test the academic influence of an interactive *Jeopardy* review, as compared to a *seatwork* review, upon test results within the context of several eighth grade social studies classes.

Definition of Terms

Interactive learning In the context of this study, this referred to communications between student and teacher, teacher and student, and student to student, in the learning process. Interactive learning takes place in many different ways. For example, an "Around the World" game provides an opportunity for interaction between all parties

involved, with the teacher proctoring, the students competing, and the students interacting with one another. Interactive learning replaces individual seatwork, and allows the learners to participate in the process of learning with others.

Seatwork review In the context of this study, this referred to the work students do quietly at their desks, namely a worksheet. This *seatwork* review highly differs from the interactive review in that students work by themselves (no group-work). This type of review includes a worksheet where students must look up answers in the text and write down the correct information.

Limitations of the Study

The sample that was represented in this study showed an upper-middle, socio-economic status, which keeps this study within a narrow application upon completion. There is little racial diversity within the sample, with an overwhelming majority of white/Caucasian students, limiting the research once again to a narrow application across the spectrum.

Assumptions

Since all classes will have the opportunity to function as both the control and experimental groups at different times, the researcher assumes the subjects stay indifferent to treatment versus non-treatment. The researcher assumes that all classes, the control and experimental, will be taught in the same manner and cover the same amount of material before the review.

Hypothesis

Students participating in the forty-five minute *Jeopardy* game review session will show no difference in test scores, at the .05 level of significance, when compared to those students participating in the *seatwork review* session.

Chapter 2

Review of Related Literature (brief overview)

"Active and Interactive Learning"

Educational reform is rampant all over the country with new popular ideas, such as cooperative learning, collaborative learning, Montessori-type, and other "student-ran" educational procedures, attempting to fix the "non-working" system. These educational ideas all revolve around one central focus: motivating students to learn. The classroom, in no way, can compete with the entertainment industry, including television, action movies, or video games. Teachers must motivate children to learn, and activity based interaction seems like a great way to go (Slavin, p. 200). In this review, past techniques, cooperative learning, collaborative learning, review techniques, and review methods will be touched on.

Jean Jacques-Rousseau, John Dewey, and many other anti-classical educators deemed early ideas of a constructivist nature, including ideas of active and hands-on learning, essential for learning (Ediger, p. 267-69). Dewey and others, reject the popular idea that learning occurs through a mind-body dualism. Many educational theorists of the middle 1900's suggested, without empirical evidence, that a transcendental entity created the mind and handed it down. Humans are to discipline and exercise the mind, developing the learning consciousness (Holst, p. 1). This theory was rejected by John L. Childs, who believed that conscious develops and meaning is then attached to it through

experience (Childs, p. 270). Dewey also disagreed with this dualism of the mind and body, believing that experience gives meaning for the child. He believed the traditional form of education as merely assimilating unrelated information. Dewey wanted to find a discipline approach that would combat this classical approach, and developed an approach many call the activity curriculum. This activity curriculum attempts to engage students in activities which encourage, excite, and interest them. For example, Childs emphasized the need of children to observe, manipulate, do, explore, and make, to create meaningful learning experiences (p. 275). The mind does not operate separate from the body, however the learning takes place through full-body engagement in experience.

Many teachers are currently using cooperative and collaborative means of teaching to motivate students to learn, get interaction with the students, encourage public speaking, and encourage creativity (Bracey, p. 254; Sullivan, p. 210). Both areas of learning, cooperative and collaborative, try to get the students to participate in group-work, allowing the students to learn the material and to effectively communicate this information within the group within the classroom settings and within "real-world" situations (Matthews et al. p. 34-35). Teachers using these methods usually tell of increased positivism in the classroom on the part of the learners (Sullivan, p. 210). Thus, interaction among the students to each other and with the teacher tends to include the content as well as the communication of the content (Hendrix, p. 59). Cooperative and collaborative learning have a large followings because:

* learning in an active mode is more effective than passively receiving information;
* the teacher is a facilitator, coach, or midwife rather than a "sage on the stage";
* teaching and learning are shared experiences between teacher and students;
* balancing lecture and small-group activities is an important part of a teacher's role;
* participating in small-group activities develops higher-order thinking skills and enhances individual abilities to use knowledge;
* accepting responsibility for learning as an individual and as a member of a group enhances intellectual development;
* articulating one's ideas in a small-group setting enhances a student's ability to reflect on his or her own assumptions and thought processes;
* developing social and team skills through the give-and-take of consensus-building is a fundamental part of a liberal education;
* belonging to a small and supportive academic community increases student success and retention; and
* appreciating (or at least acknowledging the value of) diversity is essential for the survival of a multicultural democracy. (Matthews, et al. p. 38-39)

Reviewing

Many studies show that review must be incorporated into instruction for the following reasons. First of all, review promotes retention of the material. By going over the material several times, especially if done in different methodologies, it becomes embedded into the neural networks of the brain. Since most topics are presented in pieces instead of the whole, review develops a comprehensive view of the topic, allowing students to summarize main ideas and develop generalizations (Suydam, ED260891). This allows students to use their new ideas from this material and place it into new patterns. Also, review can and should be used as a diagnostic tool, revealing weaknesses

and strengths to the students and the teacher (Suydam, 1984). Suydam also believes that the review process adds to the students' confidence levels in moving onto new topics to be covered.

Research has been conducted which shows the improvement in students' scores on major tests such as ACT, SAT, and other standardized tests for the elementary, middle, and high school youths, based on the type of review and the different ways educators "teach" a review (Moss, 1995). From teacher-structured, self-study and note-review to games and other interactive reviews, the results from different studies show the positive effectiveness of reviewing for a test.

Gifford and Williams (1985) created a study to show the effects of a teacher-structured review in a required college laboratory science lab. The research only included non-science majors, and based itself on the presupposition that students having this one hour long session will score higher than their counterparts. After the tests, from which the review was based, were taken, the researchers grouped these students into three different ACT groupings: all students, those scoring under fifteen, and those scoring over fifteen. The results showed that the teacher-structured review significantly increased the grades of those scoring under the fifteen on the ACT. The other two groups showed little measurable differences.

Another form of review consists of students writing and reviewing their notes for the class. Many different studies on note-taking show different results and show different conclusions. Researchers have found out that note-taking may help a student "encode"

what a teacher or professor says, resulting in a deeper understanding of the material (Beecher, 1988). Also, just the physical movement of writing encourages memory. Students who were allowed to review their notes immediately before a test received higher grades than those who did not review their notes, thus showing the importance of reviewing ones own notes (Beecher, 1988). Kiewra adds that teachers should provide students with a complete set of classroom notes, because students do not take complete notes (1985).

Also, one study shows that the timing of the review is essential. A short period of review throughout a unit is better for retention than one long, drawn out review (Suydam, 1984). One college study showed higher achievement on a test where students were given a one-hour teacher-structured review (Gifford & Williams, 1985). Also, students who write their own test question and turn them in to the teacher earn higher grades than students who do not in another study. Teachers who review with the class previous lessons each day for a small period of time keep the material covered fresh in their heads.

Many theorists and researchers understand who the middle school children are and what encourages them to higher learning, in most cases. For the most part, middle school children like and thrive upon competition and recognition. An interactive review structured with a game encourages healthy competition with a huge desire to win, especially if the winners receive a prize (Crawford, p. 94). Also, interaction fosters recognition of students' abilities and knowledge, but also shows the students' lack of

knowledge. Teachers observe, re-teach materials not known or understood by a student, or many students, and adjust their teaching technique, style, or material based upon this observation.

Chapter 3

METHODS AND PROCEDURES

The Subjects

The students involved in this study were eighth graders, thirteen and fourteen years old, that came from a predominantly middle to upper class social status, with a few students who came from low-income families. Many of the students have parents working for the government or at the local university. Listening to teachers at the school, these parents are extremely interested in their child's schooling and expect the educational and lifelong success of their children. Also, the large number of scheduled and completed parent-teacher conferences showed the value of education parents put on their children, as did the extremely high enrollment of parents and family members registered with the PTSA (Parent, Teacher, Student Association).

Since social studies, unlike reading and math, was not grouped according to skill level, all control and experimental classes were grouped heterogeneously, with high achieving and low achieving students dispersed among the classes. The number of students within the sample was seventy-one. With the study covering two reviews and tests, the sample increased to one-hundred forty-two.

The Timeline

This study took place in the fourth module, according to the internship handbook, of this school year (2001), which covered January third through March sixth.

Testing

The tests used consist of book tests (approximately forty multiple choice) published by *Silver Burdett & Ginn Social Studies*. Based on the school year schedule for social studies, the researcher taught chapters nine and ten from "One Flag, One Land," as published by *Silver Burdett & Ginn*. The two chapters were completed within a six-week period, because extra time was needed due to holidays, assemblies, and a snow day. Each chapter took approximately three weeks. The tests were given two days after the conclusion of the study of the chapter, with the review occurring the day before the test. The control and experimental classes were at the exact same pace, making the test days equivalent.

Once chapter nine was completed, including the review and test, the control and experimental groups were switched. For example, classes C and D were the control classrooms for chapter nine. They were switched to experimental classrooms for chapter ten, and vice versa. This doubled the size of the sample, allowed all students to participate in this experience, and allowed the data to carry more significance.

Experimental Factor, and Control of the Experimental Factor

Both the experimental and control classrooms were taught in the same manner, with the same material covered on the same days. On the day of the review (the day before the test), the two control classes received a teacher-made review worksheet. The control classrooms had the entire period, forty-five minutes, to work on this worksheet as their review. The experimental classroom, during another forty-five minute period, had

the interactive learning activity, along with the exact same teacher-made review sheet the two control classes received. This interactive learning activity, a *Jeopardy* game, covered all the material on the teacher-made review sheet that all four classes received. At the end of each classroom period, both the control and experimental groups had the rest of the review sheet assigned as homework had they not completed it during the period of social studies. Students were encouraged to study their review sheets.

This *Jeopardy* game was quite extensive, following a similar format to the television version. The researcher was the proctor, and the class, divided into three groups, were the contestants. As in the television version, the questions were numbered with monetary values, with the smallest number (i.e. $100) representing the easier questions, and the larger value (i.e. $1000), the harder questions. Once attendance was taken at the beginning of the experimental classes, the students were divided into three groups per class period. They sat in the section of pre-arranged desks. To facilitate the *Jeopardy* theme, the researcher decorated the classroom, including contestants' row and the game board.

Students sat in the pre-arranged desks in any order that they chose. Those students toward the beginning of the lineup started with easy questions, and those at the end may have had the harder questions. However, since the number of persons on each team did not match the number of questions, all students had an opportunity to answer the easier and harder questions wherever they sat. Although there were five columns with

five questions under each, the proctor went through each category in order, from least to greatest. To begin the game, the first student in each lineup came to the front of the room, where each student had a desk. The first person to raise both hands over his or her head was allowed to answer. If the answer was correct, the proper points were added to their score. However, if the question was answered incorrectly, that team lost those points, and the question remained for the other two contestants to answer. In the event that the three contestants did not correctly answer a question, the teacher asked the rest of the audience for the correct answer, and no points were added or subtracted. There were two rounds of twenty-five questions each. After the second round was over, students worked as a team in wagering and answering the *Final Jeopardy* question, which was not a question from the textbook, but one that dealt with the same historical period of time. The winning team was awarded a free-homework grade.

Analysis

The tests used to analyze the data were the chapter nine and ten test masters furnished by *Silver Burdett & Ginn Social Studies* as a part of their curriculum. The test scores for the control group (four classrooms) was tabulated by the researcher, and a mean score was calculated. The test scores for the experimental group (four classrooms) was tabulated by the researcher, and the mean score was calculated as well. A *t*-test was used to determine whether a significant difference existed between the experimental group and the control group.

Chapter 4

RESULTS

The result of this study comparing the testing results of two different types of review, *Jeopardy* and *seatwork*, showed no significant difference in the scores of these four eighth grade social studies classes. Each classroom received a review in a controlled and experimental fashion, allowing all students to participate in both. The control classrooms received the *seatwork* review, consisting of a review sheet, during the class period, and were given that whole period (forty-five minutes) to complete and study their review sheet. The experimental classrooms were handed this same review sheet, were engaged in the interactive *Jeopardy* review, and were encouraged to fill out their review sheet as the questions were being answered. The next day, all students involved in this research were tested using book tests from *Silver Burdett & Ginn Social Studies*.

A paired-sample t-test was used to analyze the data of the students between the two types of reviews. Table 1 illustrates that the control group tested at a mean score of 35.8592, which includes both book tests and all seventy-one students.

TABLE 1

A COMPARISON OF STUDENTS' TESTING SCORES BETWEEN THE *JEOPARDY* AND *SEATWORK* TYPES OF REVIEW

Groups	N	Mean	Mean Difference	Std. Error Of Mean	t-ratio	Sig. 2-tailed
Control	71	35.8592	.2254	.6794	.332	.741*
Experimental	71	35.6338				

* Not Significant

The experimental group attained a mean score of 35.6338, also including both book tests and all seventy-one students. Although the control group received higher scores on average, the research, based on the .05 level of significance, was not statistically significant. Therefore, the researcher retains his original hypothesis as presented in chapter one: Students participating in the forty-five minute *Jeopardy* game review session will show no difference in test scores, at the .05 level of significance, when compared to those students participating in the *seatwork review* session.

Chapter 5

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary

This study was conducted over a six week period within the context of four eighth grade social studies classrooms. This research, focusing on two review techniques for tests, consisted of two review days and two book tests from *Silver Burdett and Ginn Social Studies*. Each child had the opportunity to participate in both styles of review: *Jeopardy* and *seatwork*.

Students in all four classrooms received the same review sheet to fill out and study for the test. Students with the *seatwork* review were able to complete the review sheet at their desks during the classroom period, which consisted of forty-five minutes. Students with the *Jeopardy* review played a game similar to the television version, which covered the material that was on the review sheet. They had the opportunity to fill out the review sheet as the questions were answered in the game. The class was divided into three teams, with the winning team receiving a free homework grade. For the first test, classes A and B were the experimental groups that received the *Jeopardy* review, and groups C and D were the control groups receiving the *seatwork* review. For the second test, three weeks later, A and B were the control group, and C and D were the experimental group.

After the test scores were analyzed, a small difference was seen between those students reviewing with the *Jeopardy* review and those reviewing with the *seatwork* review.

However, the results were not significant when using a .05 level of significance, as shown in Table 1.

Conclusions

This study of review techniques has the ability to help teachers better prepare students for testing through reviews, and help the students score higher on their tests. Overall, on the test scores, these two types of review functioned in almost equivalent manners: Students reviewing with *Jeopardy* and students reviewing with *seatwork* received very similar scores. However, the less than 1% difference in the scores favored the *seatwork* type of review over the *Jeopardy* type of review.

Recommendations

The researcher believes that there are many areas of study that one could pursue in expanding upon this study. This study was conducted in an upper-middle class "neighborhood" in East Tennessee. The students in this study valued their education, for many of their parents were highly educated individuals. Similar, if not equivalent, studies could be enacted in different socio-economic areas to show the impact of test review style in diverse populations. This study was also conducted with eighth grade social studies students. Other researchers could easily reenact this study with other age levels and in multiple subject areas.

Many of the students in this study had already been familiar with the content of these two chapters tested, because they have been exposed to this subject matter in repeated cycles

throughout their education process. This study would have been more accurate if all students had the same knowledge base at the outset. Any researcher in the future might consider using units in which almost every student considers the material foreign.

The biggest area of this study that still lies behind the shadows, however, is the long-term memory of the chapters at hand, and an attitudinal result. This study did not measure either of these aspects, even though they just might be very important aspects of such a study. Researchers hereafter may want to include an end of the year test, with sections of the test divided into the units covered with *Jeopardy* and *seatwork*. Then, researchers will see if students can recall items from the *Jeopardy* review or *seatwork* review better than that of the other reviews.

Overall, students having the *Jeopardy* review appeared to have had more fun than those participating in the *seatwork* review. Although not recorded in a standard fashion, the fun-factor was shown through their facial expressions and in their competitive attitudes and demeanors. The *Jeopardy* review may have encouraged several non-lovers of social studies to enjoy the subject and pursue more history classes in high school. Future researchers may want to include an attitudinal survey at the beginnings and ends of a couple chapters, showing the importance of fun and competition in the learning environment.

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APPENDICES

Letter of Approval from Knox County Schools

APPENDIX A

KNOX COUNTY SCHOOLS
ANDREW JOHNSON BUILDING

Dr. Charles Q. Lindsey, Superintendent

December 19, 2000

Mr. Lee Daft
Johnson Bible College
Box 777-196
Knoxville, Tennessee 37998

Dear Mr. Daft:

You are granted permission to contact appropriate building-level administrators concerning the conduct of your proposed research study entitled, "A Comparison of Eighth Grade Students' Testing Scores Between the *Jeopardy* and *Seatwork* Types of Review." In the Knox County schools final approval of any research study is contingent upon acceptance by the principal(s) at the site(s) where the study will be conducted.

In all research studies names of individuals, groups, or schools may not appear in the text of the study unless *specific* permission has been granted through this office. The principal researcher is required to furnish this office with one copy of the completed research document.

Good luck with your study. Do not hesitate to contact me if you need further assistance or clarification.

Yours truly,

Samuel E. Bratton, Jr.

Samuel E. Bratton, Jr., Ed.D.
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Project No. 121

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Parental Approval Form

APPENDIX B

Lee Daft
7900 Johnson Drive
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Knoxville, TN
37998

Dear parent(s),

My name is Lee Daft, and I have been working as an intern in your child's eighth grade social studies classroom with Ms. Holst. I am a graduate student at Johnson Bible College where I am conducting an action research project to fulfill a requirement for a Masters Degree. This project consists of a six week period where social studies will be taught consistently throughout the different periods/sections of the day. The only difference in the instruction comes on the day before the test, also known as "review day." Half the classes will have a *Jeopardy* game as the review, and the other half will simply fill out the book worksheet in preparation for the test. Each student will then receive a study guide as homework, which will cover all the material for the test.

After the first test, the groups will switch, where the other two classes will get this *Jeopardy* review. Upon consent, your child will be anonymously included in the data, as well as the name of the Farragut Schools. I ask for your help in allowing your child to participate in this study, and if you have any questions, please give me a call at the middle school. Thank-you!

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